

**NEW CONSTRUCTION PERMIT
and
MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY**

**Mossberg & Company, Inc.
301 East Sample Street
South Bend, Indiana 46601**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 141-14368-00063	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: September 26, 2001 Expiration Date: September 26, 2006

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary source that operates offset and flexographic printing presses.

Authorized Individual: Michael Vandenburg
Source Address: 301 E. Sample Street, South Bend, Indiana 46601
Mailing Address: 301 E. Sample Street, South Bend, Indiana 46601
Phone Number:
SIC Code: 2759
County Location: St. Joseph
County Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit
Minor Source, under PSD
Area Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) The printing operation:

- (1) Press A: a non-heatset 28" by 40" 6-color sheetfed offset lithographic press with a maximum line speed of 389 feet per minute, press width of 40 inches, installed June 1989, exhausting to stack S001.
- (2) Press B: a non-heatset 20" by 29" 6-color sheetfed offset lithographic press with a maximum line speed of 416 feet per minute, press width of 29 inches, installed September 1997, exhausting to stack S002.
- (3) Press C: a non-heatset 28" by 40" 8-color sheetfed offset lithographic press with a maximum line speed of 467 feet per minute, press width of 40 inches, installed September 1997, exhausting to stack S003.
- (4) Press D: a non-heatset 22.5" by 28.5" 2-color sheetfed offset lithographic press with a maximum line speed of 312 feet per minute, press width of 28.5 inches, installed December 1983, exhausting inside the building.
- (5) Press H: a heatset 7" web letterpress with a maximum line speed of 150 feet per minute, press width of 7 inches, installed April 1985, exhausting to stack S008.
- (6) Press I: a heatset 10" ultraviolet flexographic press with a maximum line speed of 150 feet per minute, press width of 10 inches, installed December 1993, exhausting to stack S011.
- (7) Press J: a non-heatset 13" by 18" 2-color sheetfed offset lithographic press with a maximum line speed of 90 feet per minute, press width of 18 inches, installed September 1997, exhausting inside the building.

- (8) Press K: a non-heatset 28" by 40" 6-color, sheetfed offset lithographic press with a maximum line speed of 583 feet per minute, press width of 40 inches, exhausting to stack S012.
- (9) One prepress department producing printing plates for all presses.
- (b) Heaters:
 - (1) Five (5) natural gas fired heaters with a capacity of 0.231 MMBtu per hour.
 - (2) Three (3) natural gas fired heaters with a capacity of 0.27 MMBtu per hour.
 - (3) One (1) natural gas fired heater with a capacity of 0.17 MMBtu per hour.
 - (4) One (1) natural gas fired heater with a capacity of 0.06 MMBtu per hour.
 - (5) Four (4) natural gas fired heaters with a capacity of 0.08 MMBtu per hour.
 - (6) One (1) natural gas fired heater with a capacity of 0.255 MMBtu per hour.
 - (7) One (1) natural gas fired heater with a capacity of 0.25 MMBtu per hour.
 - (8) One (1) natural gas fired heater with a capacity of 0.22 MMBtu per hour.
 - (9) One (1) natural gas fired heater with a capacity of 0.27 MMBtu per hour.

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled "Minor Source Operating Permit", all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.
 - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section prior to beginning operation of the facilities.
- (b) If construction is completed in phases (i.e., the entire construction is not done continuously) a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).

- (e) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

B.7 Permit Term [326 IAC 2-6.1-7]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications or amendments of this permit do not affect the expiration

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of all criteria pollutants is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAQ prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM , the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

Record Keeping and Reporting Requirements

C.9 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality(OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.10 Annual Emission Statement [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.

- (b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.11 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C - Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.12 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:

- (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
- (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.13 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.14 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Facility Description:

(a) The printing operation:

- (1) Press A: a non-heatset 28" by 40" 6-color sheetfed offset lithographic press with a maximum line speed of 389 feet per minute, press width of 40 inches, installed June 1989, exhausting to stack S001.
- (2) Press B: a non-heatset 20" by 29" 6-color sheetfed offset lithographic press with a maximum line speed of 416 feet per minute, press width of 29 inches, installed September 1997, exhausting to stack S002.
- (3) Press C: a non-heatset 28" by 40" 8-color sheetfed offset lithographic press with a maximum line speed of 467 feet per minute, press width of 40 inches, installed September 1997, exhausting to stack S003.
- (4) Press D: a non-heatset 22.5" by 28.5" 2-color sheetfed offset lithographic press with a maximum line speed of 312 feet per minute, press width of 28.5 inches, installed December 1983, exhausting inside the building.
- (5) Press H: a heatset 7" web letterpress with a maximum line speed of 150 feet per minute, press width of 7 inches, installed April 1985, exhausting to stack S008.
- (6) Press I: a heatset 10" ultraviolet flexographic press with a maximum line speed of 150 feet per minute, press width of 10 inches, installed December 1993, exhausting to stack S011.
- (7) Press J: a non-heatset 13" by 18" 2-color sheetfed offset lithographic press with a maximum line speed of 90 feet per minute, press width of 18 inches, installed September 1997, exhausting inside the building.
- (8) Press K: a non-heatset 28" by 40" 6-color, sheetfed offset lithographic press with a maximum line speed of 583 feet per minute, press width of 40 inches, exhausting to stack S012.
- (9) One prepress department producing printing plates for all presses.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.1.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

The VOC for each printing press A, B, C, D, J, and K emitted is less than twenty five (25) tons per twelve (12) consecutive month period. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) will not apply. Any change or modification which may increase the potential emissions to twenty five (25) tons per year or more of volatile organic compounds from any printing press must be approved by the Office of Air Quality (OAQ) before any such change may occur.

D.1.2 Volatile Organic Compounds (VOCs) [326 IAC 8-5-5]

Pursuant to 326 IAC 8-5-5 (Graphic Arts Operations), the VOC content of ink used in flexographic presses (Press H and Press I) shall not exceed 0.5 pounds of VOCs per pound of solids.

D.1.3 Hazardous Air Pollutants

- (a) The potential to emit of any single hazardous air pollutant (HAP) total from the printing operation is less than ten (10) tons per twelve (12) consecutive months.
- (b) The potential to emit of a combination of hazardous air pollutants (HAPs) total from the printing operation is less than twenty five (25) tons per twelve (12) consecutive months.
- (c) Any change or modification which may increase the potential emissions of a single HAP to greater than ten (10) tons per year or of a combination of HAP to greater than twenty five (25) tons per year must be approved by the Office of Air Quality (OAQ) before any such change may occur.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.4 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, D.1.2, and D.1.3, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits established in Condition D.1.1, D.1.2, and D.1.3.
 - (1) The amount and VOC content of each ink, varnish, coating, fountain solution, press wash, prepress solution, and other VOC and HAP containing materials used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used;
 - (2) The total VOC and HAP usage for each month; and
 - (3) The weight of VOCs and HAPs emitted for each month. VOC and organic HAP emissions from inks and varnishes used in non-heatset offset presses may be estimated as 5% of the VOC content of the ink or varnish.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2

EMISSIONS UNIT OPERATION CONDITIONS

Facility Description:

(b) Heaters:

- (1) Five (5) natural gas fired heaters with a capacity of 0.231 MMBtu per hour.
- (2) Three (3) natural gas fired heaters with a capacity of 0.27 MMBtu per hour.
- (3) One (1) natural gas fired heaters with a capacity of 0.17 MMBtu per hour.
- (4) One (1) natural gas fired heater with a capacity of 0.06 MMBtu per hour.
- (5) Four (4) natural gas fired heaters with a capacity of 0.08 MMBtu per hour.
- (6) One (1) natural gas fired heater with a capacity of 0.255 MMBtu per hour.
- (7) One (1) natural gas fired heater with a capacity of 0.25 MMBtu per hour.
- (8) One (1) natural gas fired heater with a capacity of 0.22 MMBtu per hour.
- (9) One (1) natural gas fired heater with a capacity of 0.27 MMBtu per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

There are no specifically applicable requirements for this equipment.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
(Include local agency when applicable)**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under
326 IAC 2-6.1-5(a)(5).

Company Name:	Mossberg & Company, Inc.
Address:	301 East. Sample Street
City:	South Bend, Indiana 46601
Phone #:	(317) 733-2637 (Michael Vandenburg)
MSOP #:	141-14368-00063

I hereby certify that Mossberg & Company, Inc. is

☒ still in operation.

☐ no longer in operation.

I hereby certify that is Mossberg & Company, Inc. is

☒ in compliance with the requirements of
MSOP 141-14368-00063

☐ not in compliance with the requirements of
MSOP 141-14368-00063

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?____, 25 TONS/YEAR SULFUR DIOXIDE ?____, 25 TONS/YEAR NITROGEN OXIDES?____, 25 TONS/YEAR VOC ?____, 25 TONS/YEAR HYDROGEN SULFIDE ?____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?____, 25 TONS/YEAR FLUORIDES ?____, 100TONS/YEAR CARBON MONOXIDE ?____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO₂, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

**Please note - This form should only be used to report malfunctions
applicable to Rule 326 IAC 1-6 and to qualify for
the exemption under 326 IAC 1-6-4.**

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name: Mossberg & Company, Inc.
 Source Location: 301 East Sample Street, South Bend, Indiana 46601
 County: St. Joseph
 SIC Code: 2759
 Operation Permit No.: 141-14368-00063
 Permit Reviewer: ERG/MH

On August 11, 2001, the Office of Air Quality (OAQ) had a notice published in the South Bend Tribune, South Bend, Indiana, stating that Mossberg & Company, Inc., had applied for a Minor Source Operating Permit to operate a printing facility. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On August 24, 2001, Mossberg & Company, Inc., submitted comments on the proposed Minor Source Operating Permit. In the responses, additions to the permit are bolded for emphasis; the language with a line through it has been deleted.

Comment 1:

Opacity Limitations are repeated in Condition C.7 and at the end of Condition C.6.

Response to Comment 1:

OAQ has revised Conditions C.6 and C.7 as follows:

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), ~~except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:~~

- ~~_____ (a) _____ Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.~~
- ~~_____ (b) _____ Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity) monitor in a six (6) hour period.~~

C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of **thirty twenty** percent (**30%**) (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (**60%**) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a New Construction and Minor Source Operating Permit

Source Background and Description

Source Name: Mossberg & Company, Inc.
Source Location: 301 East Sample Street, South Bend, Indiana 46601
County: St. Joseph
SIC Code: 2759
Operation Permit No.: 141-14368-00063
Permit Reviewer: ERG/MH

The Office of Air Quality (OAQ) has reviewed an application from Mossberg & Company, Inc. relating to the construction of a printing press and the operation of the stationary source that operates offset and flexographic printing presses.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following registered emission units and pollution control devices:

- (a) The printing operation:
- (1) Press A: a non-heatset 28" by 40" 6-color sheetfed offset lithographic press with a maximum line speed of 389 feet per minute, press width of 40 inches, installed June 1989, exhausting to stack S001.
 - (2) Press B: a non-heatset 20" by 29" 6-color sheetfed offset lithographic press with a maximum line speed of 416 feet per minute, press width of 29 inches, installed September 1997, exhausting to stack S002.
 - (3) Press C: a non-heatset 28" by 40" 8-color sheetfed offset lithographic press with a maximum line speed of 467 feet per minute, press width of 40 inches, installed September 1997, exhausting to stack S003.
 - (4) Press D: a non-heatset 22.5" by 28.5" 2-color sheetfed offset lithographic press with a maximum line speed of 312 feet per minute, press width of 28.5 inches, installed December 1983, exhausting inside the building.
 - (5) Press H: a heatset 7" web letterpress with a maximum line speed of 150 feet per minute, press width of 7 inches, installed April 1985, exhausting to stack S008.
 - (6) Press I: a heatset 10" ultraviolet flexographic press with a maximum line speed of 150 feet per minute, press width of 10 inches, installed December 1993, exhausting to stack S011.
 - (7) Press J: a non-heatset 13" by 18" 2-color sheetfed offset lithographic press with a maximum line speed of 90 feet per minute, press width of 18 inches, installed September 1997, exhausting inside the building.

(b) Heaters:

- (1) Five (5) natural gas fired heaters with a capacity of 0.231 MMBtu per hour.
- (2) Three (3) natural gas fired heaters with a capacity of 0.27 MMBtu per hour.
- (3) One (1) natural gas fired heater with a capacity of 0.17 MMBtu per hour.
- (4) One (1) natural gas fired heater with a capacity of 0.06 MMBtu per hour.
- (5) Four (4) natural gas fired heaters with a capacity of 0.08 MMBtu per hour.
- (6) One (1) natural gas fired heater with a capacity of 0.255 MMBtu per hour.
- (7) One (1) natural gas fired heater with a capacity of 0.25 MMBtu per hour.
- (8) One (1) natural gas fired heater with a capacity of 0.22 MMBtu per hour.

(c) Three (3) presses have been removed in 2001:

- (1) Press E: with a maximum line speed of 312 feet per minute, press width of 28.5 inches, exhausting to stack S001-S007.
- (2) Press F: with a maximum line speed of 312 feet per minute, press width of 28.5 inches, exhausting to stack S001-S007.
- (3) Press G: a non-heatset 11" by 17" 2-color sheetfed offset lithographic press with a maximum line speed of 152 feet per minute, press width of 17 inches, exhausting to stack S001-S007.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

(a) The printing operations (continued)

- (8) Press K: a non-heatset 28" by 40" 6-color, sheetfed offset lithographic press with a maximum line speed of 583 feet per minute, press width of 40 inches, exhausting to stack S012.
- (9) One prepress department producing printing plates for all presses.

(b) Heaters (continued)

- (9) One (1) natural gas fired heater with a capacity of 0.27 MMBtu per hour.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) CP 141-2843-00063 issued on April 15, 1994.
- (b) CP 141-8545-00063 issued on August 27, 1997.

Enforcement Issue

- (a) IDEM is aware that a change in the usage rate of printing materials was made this resulted in a PTE greater than 25 tons per year. Therefore, the source has been operated prior to receipt of the proper minor source operating permit.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S001	Press A	24	0.66	-	ambient
S002	Press B	24	1.16	-	ambient
S003	Press C	24	1.16	-	ambient
S008	Press H	24	0.33	-	ambient
S011	Press I	24	1.00	-	ambient
S012	Press K	24	1.16	-	ambient

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on May 9, 2001 with additional information received on June 25, 2001.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct with some modification. These calculations are provided in Appendix A of this document (pages 1 through 8).

Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	0.17
PM-10	0.17
SO ₂	0.01
VOC	69.15
CO	0.61
NO _x	1.45

HAP's	Potential To Emit (tons/year)
xylene	2.20
cumene	1.76
glycol ethers	4.20
chromium	0.06
hexane	0.02
TOTAL	8.24

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants is less than one hundred (100) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants is greater than 25 tons per year, therefore, the source is subject to the provisions of 326 IAC 2-6.1.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) St. Joseph County has been classified as attainment or unclassifiable for all pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
 Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.17
PM10	0.17
SO ₂	0.01
VOC	69.15
CO	0.61
NO _x	1.45

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the twenty eight (28) listed source categories.
- (b) These emissions were based on calculations shown in Appendix A.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	0	0	0	19.54	0	0
PSD or Offset Threshold Level	250	250	250	250	250	250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit (141-14368-00063) is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than one hundred (100) tons per year,
- (b) a single hazardous air pollutant (HAP) is less than ten (10) tons per year, and
- (c) any combination of HAPs is less than twenty five (25) tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source. 40 CFR Part 60, Subpart QQ does not apply because this rule is limited to rotogravure presses.
- (b) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR Part 63, Subpart KK (Printing and Publishing Operations), because its potential for a single HAP is less than ten (10) tons per year and for a combination of HAPs is less than twenty five (25) tons per year.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1-1 (New Sources of Hazardous Air Pollutants)

This source will emit less than ten (10) tons per year of a single HAP or twenty five (25) tons per year of a combination of HAPs; therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-3-2 (Process Operations)

This rule does not apply because the printing operation does not emit PM.

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

Each printing press is not subject to the provisions of 326 IAC 8-1-6 because the potential emissions of VOC from each press are less than 25 tons per year. Also, presses H and I are subject to 326 IAC 8-5-5, therefore, this rule does not apply to these presses.

326 IAC 8-5-5 (Graphic Arts Operations)

This rule applies to flexographic presses H and I because potential VOC emissions from the source exceed twenty five (25) tons per year. Pursuant to 326 IAC 8-5-5 (Graphic Arts Operations), no owner or operator of a flexographic printing source shall allow the operation of the facility unless the volatile fraction of ink as it is applied to the substrate in the flexographic printing operation contains twenty-five percent (25%) by volume or less of organic solvent and seventy-five percent (75%) by volume or more of water; or the ink as it is applied to the substrate, less water, contains sixty percent (60%) by volume or more nonvolatile material; or meets an emission limit of one-half (0.5) pound of VOC per pound of solids in the ink.

Based on the MSDS submitted by the source and the calculations made, the flexographic ink contains less than 0.5 pounds of VOC per pound of solids.

Conclusion

The construction of an offset lithographic press (Press K) and operation of this printing facility shall be subject to the conditions of the attached proposed New Construction and Minor Source Operating Permit 141-14368-00063.

Appendix A: Emission Calculations
Emission Calculation Summary

Company Name: Mossberg & Company, Inc
Address City IN Zip: South Bend
CP#: 141-14368-00063
Plt ID: 00063
Permit Reviewer: ERG/mh
Date: 07/16/2001

PTE VOC (tpy)	
Press A	13.03
Press B	10.10
Press C	15.64
Press D	7.45
Press H	0.79
Press I	1.13
Press J	1.36
Press K	19.54

69.04

18 Natural Gas Fired Heaters							
No. of Heaters	MMBtu/hr	PTE PM (tpy)	PTE CO (tpy)	PTE NOx (tpy)	PTE SO2 (tpy)	PTE VOC (tpy)	
5	0.231	0.06	0.20	0.48	0.00	0.04	
4	0.27	0.05	0.19	0.44	0.00	0.03	
1	0.17	0.01	0.03	0.07	0.00	0.01	
1	0.06	0.00	0.01	0.02	0.00	0.00	
4	0.08	0.02	0.06	0.13	0.00	0.01	
1	0.255	0.01	0.04	0.10	0.00	0.01	
1	0.25	0.01	0.04	0.10	0.00	0.01	
1	0.22	0.01	0.04	0.09	0.00	0.01	
TOTALS		0.17	0.61	1.45	0.01	0.11	

	Actual VOC Emissions (ton/yr)	Potential VOC Emissions (1) (ton/yr)
All Presses & Heaters	21.96	69.15

Potential HAP Emissions

	PTE Xylene (1) (ton/yr)	PTE Cumene (1) (ton/yr)	PTE Glycol Ether (1) (ton/yr)	PTE Chromium (1) (ton/yr)	PTE Hexane (1) (ton/yr)	PTE Total HAP Emissions (1) (ton/yr)
All Presses	2.20	1.76	4.20	0.06	0.02	8.24

(1) Indiana Method for calculating Potential Emissions

Max Throughput (MMin²/yr) = Max Line Speed (ft/min) x 12 (in/ft) x Max Press Width (in) x 60 (min/hr) x 8760 (hr/yr) x 1/1,000,000 (MMin²/in²)

Maximum Usage (lb/yr) = Total Actual Usage of Products in Category (lb/yr) x 1/Percent of Capacity

% Capacity = Actual throughput (MMin²)/maximum throughput (MMin²)

Max Coverage (lb/MMin²) = Maximum Usage (lb/yr) x 1/ Max Throughput (yr/MMin²)

Potential Emissions (ton/yr) = Max Coverage (lb/MMin²) x Max Throughput (MMin²/yr) x Weight % x Flash Off % x 1/2000 (ton/lb)

Appendix A: Emission Calculations
Capacity Calculation
Company Name: Mossberg & Company, Inc
Address City IN Zip: South Bend
CP#: 141-14368-00063
Plt ID: 00063
Permit Reviewer: ERG/mh
Date: 07/16/2001

Offset Lithographic Presses

Before Construction					
	Max Line Speed (ft/min)	Press Width (Inches)	Max Thruput (MMin ² /yr)	Operating Hours in 2000 (hr/yr)	Actual Thruput (MMin2/yr)
Press A	389	40	98,140	4000	44813
Press B	416	29	76,090	4000	34744
Press C	467	40	117,818	6000	80698
Press D	312	28.5	56,084	1000	6402
Press E	312	28.5	56,084	1000	6402
Press F	312	28.5	56,084	1000	6402
Press G	152	17	16,298	2000	3721
Press J	90	18	10,218	1000	1166
			<div></div> 486,815		<div></div> 184,349
			Lithographic % Capacity Before Construction		37.9%
After Construction					
Press K	583	40	147,084	-	-
Removed Presses (E, F & G)			<div></div> -128,465	-	-
			<div></div> 505,434		

Flexographic Presses

	Max Line Speed (ft/min)	Press Width (Inches)	Max Thruput (MMin²/yr)	Operating Hours in 2000 (hr/yr)	Actual Thruput (MMin²/yr)
Press H	150	7	6,623	2000	1512
Press I	150	10	9,461	2000	2160
			16083		3672
			Flexographic % Capacity		22.8%

Max Thruput (MMin²/year) = Max line speed (feet per minute) * 12 (inches/ft) * press width (inches) * 60 (minutes/hour) * 8760 (hours/year) * 1 MMin²/1,000,000 in²

Actual Thruput = Max Thruput * Actual Operating Hours/8760 hours

% capacity = $\frac{\text{Actual Thruput Before Construction}}{\text{Maximum Thruput Before Construction}}$

Appendix A: Emission Calculations
Actual VOC Emission Calculation
Company Name: Mossberg & Company, Inc
Address City IN Zip: South Bend
CP#: 141-14368-00063
Plt ID: 00063
Permit Reviewer: ERG/mh
Date: 07/16/2001

Product	Category	CS MSDS #	Product Density (lb/gal)	Actual Usage (GAL/yr)	Actual Usage (LB/yr)	Weight % VOC	Flash Off %	Actual VOC Emissions (ton/yr)
Offset Lithographic Presses								
Isopropyl Alcohol	Fountain Soln. Add.	5	6.59	1705		100.00%	100%	5.62
Allied Web Fount Four Star	Fountain Soln. Add.	New	8.60	55		7.00%	100%	0.02
LL Kicker Alcohol Substitute	Fountain Soln. Add.	New	7.84	120		73.00%	100%	0.34
Pure Gum Arabic	Fountain Soln. Add.	New	9.26	95		0.00%	100%	0.00
Diagnostic Ink	Ink/Varnish	New			856	10.72%	5%	0.00
All Inks	Ink/Varnish	New			34391	6.00%	5%	0.05
Gloss Varn CV-914	Ink/Varnish	New			98	23.00%	5%	0.0006
Dull Varn W-3510	Ink/Varnish	New			260	12.00%	5%	0.0008
17185 High Gloss Topcoat	Coating	45			1455	4.00%	100%	0.03
Aqueous Coating 1288NC	Coating	New			61780	0.88%	100%	0.272
Aqueous Coating (1314C "Satin")	Coating	New			9120	0.52%	100%	0.0237
Color Wash Step-1	Press Wash	3	7.51	165		66.05%	100%	0.41
Wash V-120	Press Wash	9	6.78	1705		100.00%	100%	5.78
Pronto (B010009)	Press Wash	4	6.68	165		95.26%	100%	0.52
LL Econo Wash	Press Wash	New	6.93	1870		97.00%	100%	6.29
Plate Conditioner	Press Wash	13	8.49	60		6.01%	100%	0.02
Exxsol Naptha VM&P (DSP 115/145)	Press Wash	New	6.20	770		100.00%	100%	2.39
Dyna Klean	Press Wash	New	8.10	5		10.00%	100%	0.002
Dampening System Cleaner	Press Wash	New	8.40	12		9.40%	100%	0.005
STA Open Spray	Ink Additive	New			75.6	98.00%	100%	0.037
Flexographic Presses								
Deco Flex	Ink/Varnish	32	9.52	84		0.00%	100%	0.00
UKA Ink	Ink/Varnish	37			163	0.09%	100%	0.00
15033 High Gloss Topcoat	Coating	44	9.30	75		2.00%	100%	0.01
Prokote Primer KAA06415F/B	Coating	6	7.33	5		81.45%	100%	0.01
Propyl Acetate	Press Wash	31	7.41	10		100.00%	100%	0.04
Quick Clean	Press Wash	38	8.09	2		100.00%	100%	0.01
UVT Gold	Press Wash	42	9.51	20		100.00%	100%	0.10
						TOTAL		21.96

⁽³⁾ Flash off % is determined from the EPA CTG Document for Offset Lithographic Printing

Appendix A: Emission Calculations
HAP Calculation
Company Name: Mossberg & Company, Inc
Address City IN Zip: South Bend
CP#: 141-14368-00063
Pit ID: 00063
Permit Reviewer: ERG/mh
Date: 07/16/2001

Product	Category	Xylene %	Cumene %	Glycol Ether %	Chromium %	Flash Off %	Hexane %	Max Coverage (lb/MMin2)	PTE Xylene (tpy)	PTE Cumene (tpy)	PTE Glycol Ether (tpy)	PTE Chromium (tpy)	PTE Hexane (tpy)
Offset Lithographic Presses					Lithographic Maximum Thruput			505,434					
Isopropyl Alcohol	Fountain Soln. Add.					100%		0.0734					
Allied Web Fount Four Star	Fountain Soln. Add.				0.30%	100%		0.0734				0.06	
LL Kicker Alcohol Substitute	Fountain Soln. Add.					100%		0.0734					
Pure Gum Arabic	Fountain Soln. Add.					100%		0.0734					
Diagnostic Ink	Ink/Varnish					5%		0.1931					
All Inks	Ink/Varnish					5%		0.1931					
Gloss Varn CV-914	Ink/Varnish					5%		0.1931					
Dull Varn W-3510	Ink/Varnish					5%		0.1931					
17185 High Gloss Topcoat	Coating					100%		0.3925					
Aqueous Coating 1288NC	Coating					100%		0.3925					
Aqueous Coating (1314C "Satin")	Coating					100%		0.3925					
Color Wash Step-1	Press Wash					100%		0.1742					
Wash V-120	Press Wash			5.00%		100%		0.1742			2.20		
Pronto (B010009)	Press Wash			5.00%		100%		0.1742			2.20		
LL Econo Wash	Press Wash	1.60%	1.00%			100%		0.1742	0.70	0.44			
Plate Conditioner	Press Wash					100%		0.1742					
Exxsol Naptha VM&P (DSP 115/145)	Press Wash					100%		0.1742					
Dyna Klean	Press Wash	5.00%	4.00%			100%		0.1742	2.20	1.76			
Dampening System Cleaner	Press Wash			9.40%		100%		0.1742			4.14		
STA Open Spray	Ink Additive					100%	20.00%	0.0004					0.02
Flexographic Presses					Flexographic Maximum Thruput			16,083					
Deco Flex	Ink/Varnish					100%		0.2622					
UKA Ink	Ink/Varnish					100%		0.2622					
15033 High Gloss Topcoat	Coating					100%		0.1999					
Prokote Primer KAA06415F/B	Coating					100%		0.1999					
Propyl Acetate	Press Wash					100%		0.0764					
Quick Clean	Press Wash					100%		0.0764					
UVT Gold	Press Wash			10.00%		100%		0.0764			0.06		
								Worst Case Each HAP (tons)	2.20	1.76	4.20	0.06	0.02

HAP Emissions = Maximum Thruput (MMin2/yr) * Maximum Coverage (lb/MMin2) HAP wt%*Flash Off%/2000 (lb/ton)

Bold Italics indicate quantities included in worst case PTE. Worst case assumes continuous operation using the raw materials with the highest total HAP content. Not all HAPs in the table above are included in the worst case PTE because other materials in the same category have a higher HAP content.